

AMENDMENT

IN THE CLAIMS

Please amend the claims as indicated in Appendix A submitted herewith according to the proposed revision to 37 C.F.R. §1.121 concerning a manner for making claim amendments.

REMARKS

Claims 1, 3-4, 10-12 and 17 are presently pending in the captioned application with claims 1 and 17 amended and claims 2, 5-9 and 13-16 deleted without disclaimer or prejudice as to the subject matter contained therein.

Applicant's representative would like to thank the Examiner for taking the time to conduct an in-person Interview on January 31, 2003. During the Interview, Applicant's representative suggested amending the transitional phrase "comprises" of claims 1 and 17 to "consisting essentially of", thereby limiting the scope of the claims to the recited materials and steps and other limitations that do not materially affect the basic and novel characteristics of the claimed invention. The Examiner then stated that the burden would be on Applicant to show that the said preamble phrase excludes un-extracted coffee material.

Subsequently, Applicant now amends the transitional phrase

"comprising" of claims 1 and 17 to "consisting essentially of". For purposes of making clear what is regarded as constituting a material change in the basic and novel characteristics of the invention, Applicant notes that the present invention is limited to a claimed extraction residue remaining after roasted coffee beans are extracted with hot water or with an aqueous solution of alcohol.

Applicant notes that claim 17 has also been amended to overcome an indefiniteness rejection. Support for the amendment to claim 17 can be found in the specification at page 1, lines 9-13, 20-23 and 33-34 as well as in claim 1.

No new matter within the meaning of § 132 has been added by any of the amendments.

Accordingly, Applicant respectfully requests the Examiner to enter the claim amendments, reconsider the rejections in view of the arguments and allow all claims pending in this application.

1. Rejection of Claim 17 under
35 U.S.C. § 112, 2nd paragraph

The Office Action rejects claim 17 under 35 U.S.C. § 112, 2nd paragraph as being indefinite for failing to particularly point out

and distinctly claim the subject matter of the invention.

The Office Action states that the scope of the phrase "substantially little coffee flavor" of claim 17 is unknown.

Applicant respectfully traverses the rejection because the term "substantially" clearly implies that something less than exact correspondence is required. See Performed Line Products Co. v. Fanner Mfg. Co., 124 USPQ 288 (D.C. N. Ohio). However, for the sole purpose of expediting prosecution, Applicant has amended claim 17 to recite "an extraction residue remaining after roasted coffee beans are extracted with hot water or with an aqueous solution of alcohol". As stated in the remarks section, support for the amendment can be found in the specification at page 1, lines 9-13, 20-23 and 33-34.

Accordingly, Applicant respectfully submits that the presently claimed invention is definite and requests that the Examiner reconsider and withdraw the rejection of claim 17 under § 112, 2nd paragraph.

2. Rejection of Claims 1, 3-4, 10, 12 and 17
under 35 U.S.C. § 103(a)

The Office Action rejects claims 1, 3-4, 10, 12 and 17 under 35 U.S.C. § 103(a) as being unpatentable over "The New Complete Joy

of Home Brewing", C. Papazian, Avon Books, New York, 1991, pp. 95-99 ("Papazian") in view of U.S. Patent No. 5,329,708 ("Rizzi et al.") for the reasons set forth in Paper No. 7. Paragraphs 12-17 of Paper no. 7 state:

Papazian teaches that cited above. He does not teach obtaining the coffee flavor and aromas from spent coffee grounds. While Papazian does not state what type of yeast was used to produce his alcoholic beverage, the use of wine yeast is notoriously well known in the production of high alcohol beverages.

Rizzi et al teach the use of defatted spent coffee grounds that are used to absorb bitter coffee flavors and burnt coffee aromas, whereby, after said flavors and aromas are absorbed by said spent grounds, the adsorbent is added to roasted ground coffee. (Abstract). The spent coffee is defatted with a solvent such as ethanol, (col. 6, lines 6-15). The spent coffee "is inexpensive, unadulterating, [and] tasteless" (col. 3, lines 6-9). The spent coffee can originate from an instant coffee process (col. 3, line 67 to col. 4, line 2). It would have been obvious to those of ordinary skill in the art to produce alcoholic coffee drinks of Papazian using coffee produced by the coffee process of Rizzi et al because alcoholic beverage producers have traditionally added a wide variety of flavors, including coffee, to produce drinks with novel flavors and tastes.

Applicant then traversed the rejection in the Response of November 18, 2002, and argued that the cited references fail to teach each and every claimed limitation and also fail to suggest or motivate one of ordinary skill to make the presently claimed invention. In particular, Applicant argued that neither Papazian

nor Rizzi et al. discloses brewing an alcoholic beverage from an extraction residue of coffee grounds remaining after roasted coffee grounds are extracted with water and alcohol. Applicant further argued that the cited references also fail to suggest that said extraction residue would be suitable for producing a coffee flavored alcoholic beverage particularly in view of the fact that Rizzi et al. reference explicitly teaches that "spent coffee is inexpensive, unadulterating, [and] tasteless" and useful as an adsorbent. See Rizzi et al. at col. 3, lines 6-9.

However, the Examiner in the outstanding Office Action maintained the rejection in Paper No. 32 and stated:

The rejection is based on obviousness whereby the teaching of the two reference combined teach the limitations. The examiner agree that neither reference anticipates the claims. Again, it is respectfully asserted that motivation is found in the holding of *In re Levin*.

Applicant respectfully traverses the maintained rejection for a second time because the outstanding Office Action fails to satisfy the first prong of the *prima facie* case of obviousness. In particular, the Office Action has failed to establish how one of ordinary skill in the art would have been motivated to make an alcoholic beverage from a discarded waste extraction residue. See *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991) (stating that a *prima facie* case of obviousness must

establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all claim limitations).

As stated previously, coffee aromas and flavors are comprised of complex, unstable and volatile sulfurous compounds. Therefore, coffee grounds rapidly lose their flavor pursuant to any extraction process. See U.S. 6,337,098 ("Spencer et al."). In particular, exposure to air results in rapid oxidation of the volatile sulfurous compounds. Consequently, the prior art as shown by Spencer et al. attempts to prevent oxidation of the chemical composition of coffee through the use of vacuum, hermetic-sealing or even by contacting coffee with a noble gas during processing.

Clearly, one of ordinary skill in the art would not have had any motivation or suggestion to re-use extraction residues of spent coffee grounds that have been exposed to atmosphere, moisture, and hot ambient temperatures characteristic of hot water and/or ethanol extraction. Spent coffee grounds are simply discarded as waste products due to the understanding that extraction residues are completely devoid of coffee flavor.

Regarding the Office Action's application of In Re Levin, Applicant notes that the presently claimed method is not a simple recipe for cooking food which involves addition or elimination of common ingredients but rather a novel and unobvious method for re-

using waste extraction residues of spent coffee grounds that have been exposed to atmosphere, moisture, and hot ambient temperatures characteristic of hot water and/or ethanol extraction. Although spent coffee grounds can certainly be used to adsorb bitter or burnt coffee flavors as is taught in Rizzi et al., one of ordinary skill would not have extended that understating to mean that spent could also be revived to make a flavorful and aromatic coffee beverage. Clearly, the first prong of the *prima facie* case of obviousness does not exist against the presently pending claims.

But assuming that the *prima facie* case of obviousness is established, Applicant nevertheless rebuts the presumption of obviousness with evidence of unexpected results, namely the unexpected result of a coffee flavored alcoholic beverage produced from a waste extraction residue. As stated by the court in Graham v. John Deere Co., a *prima facie* case of obviousness can be rebutted by secondary considerations such as commercial success, long felt but unsolved need, failure of others, and unexpected results. 148 U.S.P.Q. 459 (1966).

As shown in Tables 1-12 of the specification, a spray-dried extraction residue of roasted coffee beans that have been extracted with aqueous solutions of ethanol unexpectedly produced a coffee flavor beverage. Contrary to what might have been expected, the waste extraction residue of roasted coffee beans resulted in a

coffee-like taste as measured by organoleptic tests and produced a flavorful coffee beverage from what was previously thought to be simply waste material.

Regarding the Examiner's assertion that Applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention, Applicant submits that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of" and that the introduction of additional steps or components other than basic and novel characteristics would materially change the characteristics of applicant's invention. See In re De Lajarte, 143 USPQ 256 (CCPA 1964); See also Ex parte Hoffman, 12 USPQ2d 1061 (Bd. Pat. App. & Inter. 1989).

In particular, only waste coffee extracts are used in the presently claimed process for producing an alcoholic drink having coffee flavor and the presently claimed method for reusing an extraction residue remaining after roasted coffee beans are extracted with hot water or with an aqueous solution of alcohol.

As stated in the specification at page 1, the invention relates to the production of alcoholic beverages having a rich aroma of coffee by utilizing an extraction residue of roasted coffee beans. As further stated at line 27, the coffee beans are

therefore waste. Still further, lines 33-34 state that the waste coffee grounds have an absence of coffee extract. Therefore, any other type of starting material other than those recited in the specification constitutes a material change in the basic and novel characteristics of the invention. Notably, specific percent ranges of ethanol aqueous solutions used to extract the coffee or amounts of saccharide or other routine optimization of known process limitations do not materially change the basic and novel characteristics of the invention.

Accordingly, Applicants respectfully submit that they have met their burden and submit that the presently claimed invention is not obvious and request the Examiner to reconsider and withdraw the rejections under § 103(a).

3. Rejection of Claim 11
under 35 U.S.C. § 103(a)

The Office Action rejects claim 11 as being unpatentable over Papazian in view of U.S. Patent No. 5,328,708 ("Rizzi et al.") and in further view of U.S. Patent No. 3,845,220 ("Suzuki") for the reasons set forth in the last Office Action. The last Office Action states:

Papzian in view of Rizzi et al teach that cited above but do not disclose the addition of a hydrolase. Suzuki teaches the addition

of an enzyme, such as a protease, amylase, cellulase, hemicellulase and pectinase to modify the foaming properties of a coffee carbonated beverage. It would have been obvious to those of ordinary skill in the art to add a hydrolase as done by Suzuki to the alcoholic beverages of Papazian in view of Rizzi et al because it is modifying a result effective variable that is beneficial to the foaming properties of the beverages.

Applicant respectfully traverses the maintained rejection because the outstanding Office Action fails to satisfy the first prong of the *prima facie* case of obviousness and incorporate herein by reference all the arguments made over the rejection of claims 1, 3-4, 10, 12 and 17 over Papazian in view of Rizzi et al. as provided in sub-heading 2. In particular, the Office Action fails to establish how one of ordinary skill in the art would have been motivated to make an alcoholic beverage from a discarded waste extraction residue. See Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991) (stating that a *prima facie* case of obviousness must establish: (1) some suggestion or motivation to modify the references; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all claim limitations).

As stated previously, coffee aromas and flavors are comprised of complex, unstable and volatile sulfurous compounds. Therefore, coffee grounds rapidly lose their flavor pursuant to any extraction

process. See U.S. 6,337,098 ("Spencer et al."). In particular, exposure to air results in rapid oxidation of the volatile sulfurous compounds. Consequently, the prior art as shown by Spencer et al. attempts to prevent oxidation of the chemical composition of coffee through the use of vacuum, hermetic-sealing or even by contacting coffee with a noble gas during processing.

Clearly, one of ordinary skill in the art would not have had any motivation or suggestion to re-use extraction residues of spent coffee grounds that have been exposed to atmosphere, moisture, and hot ambient temperatures characteristic of hot water and/or ethanol extraction. Spent coffee grounds are simply discarded as waste products due to the understanding that extraction residues are completely devoid of coffee flavor.

Since a *prima facie* case of obviousness does not exist against claim 10 as argued in sub-heading 2; claim 11, which depends from claim 10, which in turn depends from claim 1 and thereby incorporates all the limitations thereof, is similarly not rendered obvious by the cited references.

Accordingly, Applicants respectfully submit that the presently claimed invention is not obvious and request the Examiner to reconsider and withdraw the rejection under § 103(a).

CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of the pending claims and allow the pending claims. Favorable action with an early allowance of the claims pending is earnestly solicited.

Respectfully submitted,

SHERMAN & SHALLOWAY



Attorney for Applicants
Roger C. Hahn
Reg. No. 46,376

SHERMAN AND SHALLOWAY
P.O. Box 788
Alexandria, Virginia 22313
(703) 549-2282